

**NATIONAL WEATHER SERVICE MANUAL 10-913**

**June 16, 2003**

**Operations and Services**

**Hydrologic Services Program, NWSPD 10-9**

**RIVER FORECAST CENTER PRODUCT EXAMPLES**

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**NOTICE:** This publication is available at: <http://www.nws.noaa.gov/directives/>

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**OPR:** OS31 (K. Lynott)

**Certified by:** OS3 (T. Graziano)

**Type of Issuance:** Routine.

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**SUMMARY OF REVISIONS:** This directive supersedes NWS Manual 10-913, dated September 17, 2002. The following revisions were made to this instruction:

- (1) Modified product examples to incorporate the requirement in NWSI 10-1701 for the agency name and river forecast center name to collectively occupy only one line in the MND header. Previously, two lines were used - one line for "National Weather Service" and one for the RFC name.
- (2) Modified product examples to incorporate the requirement in NWSI 10-1701 for \$\$ to be placed at the end of products.
- (3) Removed the example of an RVA product since issuance of that product by RFCs is not a national practice.

Signed

June 2, 2003

\_\_\_\_\_  
Gregory A. Mandt  
Director, Office of Climate,  
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\_\_\_\_\_  
Date

**River Forecast Center Product Examples**

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1. Purpose. This document provides examples of river forecast center (RFC) products described in NWS Instruction 10-912. Although RFC products have become more standardized, more than one format is provided for several of the following products. These examples cover the more common types of formats used and should not be taken as the only prescribed formats.

**2. Short Term Hydrologic Forecasts (RVF).**

**2.1 Example #1 - In SHEF.**

```

FGUS54 KTUA 141341
RVFICT

RIVER FORECAST
NWS ARKANSAS BASIN RIVER FORECAST CENTER TULSA OK
838 AM CDT FRI JUN 14 2002
:
:THIS IS A NWS GUIDANCE PRODUCT FROM THE RIVER FORECAST CENTER.
:OFFICIAL FORECASTS/WARNINGS ARE ISSUED ONLY BY VARIOUS LOCAL NWS OFFICES.
:BELOW ARE 6-HOURLY FORECASTS.
:FORECAST GROUP IS HAV_ARKANSAS_FLOOD
:
:*****
:ARKANSAS RIVER AT ARKANSAS CITY 1W
:FLOOD STAGE 17.0
:
:REMAIN NEAR FLOOD STAGE NEXT 12 HOURS..THEN FALL.
:
:LATEST STAGE 16.89 FT AT 745 AM CDT ON 0614
.ER ARCK1 0614 C DC200206140838/DH13/HGIFF/DIH6
:QPF FORECAST 7AM 1PM 7PM 1AM
.E1 :0614: / 17.0/ 17.0/ 16.7/ 16.5
.E2 :0615: / 16.2/ 15.6/ 14.9/ 14.2
.E3 :0616: / 13.6/ 13.1/ 12.7/ 12.3
.E4 :0617: / 11.9/ 11.6/ 11.3/ 11.1
.E5 :0618: / 10.9/ 10.7/ 10.5/ 10.4
.E6 :0619: / 10.3
.ER ARCK1 0614 C DC200206140838/DH13/PPQFZ/DIH6/ 0.00/0.00
.ER ARCK1 0614 C DC200206140838/DH13/HGIFZ/DIH6
:NON-QPF FORECAST 7AM 1PM 7PM 1AM
.E1 :0614: / 17.0/ 17.0/ 16.7/ 16.5
.E2 :0615: / 16.2/ 15.6/ 14.9/ 14.2
.E3 :0616: / 13.6/ 13.1/ 12.7/ 12.3
.E4 :0617: / 12.0/ 11.7/ 11.4/ 11.1
.E5 :0618: / 10.9/ 10.7/ 10.6/ 10.4
.E6 :0619: / 10.3
:*****
:COMMENT
:
:
.AR TUA 0614 C Dt200206140838/YIIRZ 6: gbs
:
:...END OF MESSAGE...

$$

```

**2.2 Example #2 - In Text followed by SHEF.**

```

FGUS56 KRSA 251420
RVFUSA

ISSUED: MON FEB 25 2002 619 AM PST

NEXT: TUE FEB 26 2002 700 AM PST

```

UPPER SACRAMENTO RIVER SYSTEM FORECAST

CALIFORNIA NEVADA RIVER FORECAST CENTER, NATIONAL WEATHER SERVICE AND THE CALIFORNIA DEPARTMENT OF WATER RESOURCES, SACRAMENTO, CA

ALL STAGES ARE BELOW MONITOR LEVEL. STAGES ON THE UPPER SACRAMENTO RIVER WILL CONTINUE TO RECEDE SLOWLY DURING THE NEXT FEW DAYS AS DRY WEATHER PREVAILS.

FORECASTS ARE BASED ON PRESENT AND FORECASTED METEOROLOGICAL AND HYDROLOGIC CONDITIONS AT TIME OF ISSUANCE.

SACRAMENTO RIVER AT

BEND BRIDGE 6 AM STAGE 3.0 FT
FORECAST TO RECEDE TO NEAR 2.5 FT TUESDAY AFTERNOON
MONITOR STAGE 22.0 FT, FLOOD STAGE 27.0 FT
TEHAMA BRIDGE 6 AM STAGE 202.3 FT
FORECAST TO RECEDE TO NEAR 202.0 FT TUESDAY MORNING
MONITOR STAGE 210.0 FT, FLOOD STAGE 213.0 FT
VINA WOODSON BRIDGE 6 AM STAGE 167.4 FT
FORECAST TO RECEDE TO NEAR 167.0 FT TUESDAY MORNING
MONITOR STAGE 180.0 FT, FLOOD STAGE 183.0 FT
ORD FERRY 6 AM STAGE 97.9 FT
FORECAST TO RECEDE TO NEAR 97.5 FT TUESDAY MORNING
MONITOR STAGE 110.0 FT, FLOOD STAGE 114.0 FT
DANGER STAGE 122.6 FT
COLUSA 6 AM STAGE 47.7 FT
FORECAST TO RECEDE TO NEAR 46.0 FT WEDNESDAY MORNING
MONITOR STAGE 63.0 FT, FLOOD STAGE 70.0 FT
DANGER STAGE 71.0 FT

UNLISTED FORECAST POINTS ARE EXPECTED TO REMAIN BELOW MONITOR STAGE. ALL THOSE AFFECTED BY RIVER CONDITIONS SHOULD REMAIN ALERT FOR RAPID CHANGES AND FOR POSSIBLE FORECAST REVISIONS.

&&

.A BDBC1 20020225 P DH06/HG 3.0 :OBSERVED
.E BDBC1 20020225 P DH10/DC200202250619/HGIFEZZ/DIH03/ 3.0/ 2.9/ 2.9/ 2.8/
.E1 2.8/ 2.7/ 2.7/ 2.6/ 2.6/ 2.5/ 2.5
.A TEHC1 20020225 P DH06/HG 202.3 :OBSERVED
.E TEHC1 20020225 P DH10/DC200202250619/HGIFEZZ/DIH03/202.3/202.2/202.2/202.1/
.E1 202.1/202.1/202.0/202.0
.A VWBC1 20020225 P DH06/HG 167.4 :OBSERVED
.E VWBC1 20020225 P DH10/DC200202250619/HGIFEZZ/DIH03/167.3/167.3/167.2/167.2/
.E1 167.1/167.1/167.0/167.0
.A ORFC1 20020225 P DH06/HG 97.9 :OBSERVED
.E ORFC1 20020225 P DH10/DC200202250619/HGIFEZZ/DIH03/ 97.8/ 97.8/ 97.7/ 97.7/
.E1 97.6/ 97.6/ 97.5/ 97.5
.A CLUC1 20020225 P DH06/HG 47.7 :OBSERVED
.E CLUC1 20020225 P DH10/DC200202250619/HGIFEZZ/DIH03/ 47.6/ 47.5/ 47.4/ 47.3/
.E1 47.2/ 47.1/ 47.0/ 46.8/ 46.7/ 46.6/ 46.5/ 46.4/ 46.3/ 46.2/
.E2 46.1/ 46.0
.END

\$\$

**3. Extended-Range Streamflow Guidance (ESG).**

**3.1 Example #1 - Long Narrative.**

FGUS61 KRHA 220141  
ESGRHA

FLOOD POTENTIAL STATEMENT  
NWS MIDDLE ATLANTIC RIVER FORECAST CENTER STATE COLLEGE PA  
841 PM EST THU FEB 21 2002

...LATE WINTER RIVER FLOOD POTENTIAL...

OUTLOOK NUMBER 02-4 FEBRUARY 21, 2002

INTRODUCTION:

THE MIDDLE ATLANTIC RIVER FORECAST CENTER (MARFC) IS ONE OF 13 NATIONAL WEATHER SERVICE (NWS) RIVER FORECAST CENTERS LOCATED ACROSS THE CONTINENTAL UNITED STATES. MAJOR RIVER BASINS LOCATED WITHIN THE MARFC AREA OF RESPONSIBILITY INCLUDE THE SUSQUEHANNA, DELAWARE, RARITAN, PASSAIC, POTOMAC, SHENANDOAH, RAPPAHANNOCK, JAMES AND APPOMATTOX. STATES LOCATED WITHIN THE MARFC AREA OF RESPONSIBILITY INCLUDE ALL/PORIONS OF NEW YORK, PENNSYLVANIA, NEW JERSEY, WEST VIRGINIA, MARYLAND, DELAWARE AND VIRGINIA.

THE FOLLOWING OUTLOOK ESTIMATES THE POTENTIAL FOR RIVER FLOODING (NOT FLASH FLOODING) ACROSS THE MARFC AREA OF RESPONSIBILITY (MID-ATLANTIC REGION) BASED ON A CURRENT ASSESSMENT OF HYDROMETEOROLOGICAL FACTORS WHICH CONTRIBUTE TO RIVER FLOODING. ACROSS THE MARFC AREA, THESE FACTORS INCLUDE RECENT PRECIPITATION, SOIL MOISTURE, SNOW COVER AND SNOW WATER EQUIVALENT, RIVER ICE, STREAMFLOW, FUTURE WEATHER CONDITIONS, AND OTHERS. THIS OUTLOOK DOES NOT ADDRESS THE SEVERITY OF ANY FUTURE RIVER FLOODING.

THIS OUTLOOK IS VALID FOR THE TWO-WEEK PERIOD FEBRUARY 21-MARCH 7, 2002, AND IS PARTIALLY BASED ON THE LATEST NWS MEDIUM-RANGE (6-10 DAY) WEATHER FORECAST. FOR THE MID-ATLANTIC REGION, THIS FORECAST SUGGESTS THAT PRECIPITATION AVERAGED OVER THE FIVE-DAY PERIOD FROM FEBRUARY 27 - MARCH 3 WILL LIKELY BE NEAR OR ABOVE NORMAL, WHILE TEMPERATURES DURING THE SAME FIVE-DAY PERIOD WILL LIKELY BE BELOW NORMAL.

IN THE MID-ATLANTIC REGION, HEAVY RAINFALL IS THE PRIMARY FACTOR WHICH LEADS TO RIVER FLOODING. IT IS IMPORTANT TO NOTE THAT HEAVY RAINFALL CAN RAPIDLY CAUSE RIVER FLOODING ANY TIME OF THE YEAR, EVEN WHEN OVERALL RIVER FLOOD POTENTIAL IS CONSIDERED BELOW AVERAGE.

CURRENT RIVER FLOOD POTENTIAL - BELOW AVERAGE. THE POTENTIAL FOR RIVER FLOODING DURING THE NEXT TWO WEEKS ACROSS THE MARFC SERVICE AREA CONTINUES TO BE BELOW AVERAGE FOR LATE WINTER. THIS ASSESSMENT OF THE RIVER FLOOD POTENTIAL IS BASED ON AN ANALYSIS OF NUMEROUS HYDROMETEOROLOGICAL CONDITIONS, AS SUMMARIZED BELOW. IN ADDITION, A NEW NWS PROGRAM CALLED ADVANCED HYDROLOGIC PREDICTION SERVICES (AHPS) IS GRADUALLY BEING IMPLEMENTED BY MARFC. THIS PROGRAM ENABLES HYDROLOGISTS TO MAKE LONGER-RANGE STREAMFLOW FORECASTS USING A COMBINATION OF CURRENT AND HISTORICAL (1950-1998) HYDROMETEOROLOGICAL DATA TO CREATE A RANGE OF FUTURE STREAMFLOW PREDICTIONS.

SUMMARY - THE POTENTIAL FOR RIVER FLOODING DURING THE NEXT TWO WEEKS ACROSS THE MARFC AREA OF RESPONSIBILITY IS BELOW AVERAGE FOR LATE WINTER. THE DEVELOPMENT OF RIVER FLOODING DURING THE NEXT TWO WEEKS COULD ONLY ARISE FROM AN UNUSUALLY WARM AND WET RAIN STORM. AT THE PRESENT TIME, NO WIDESPREAD HEAVY RAINS ARE INDICATED FOR AT LEAST THE NEXT WEEK OR SO.

WATER SUPPLY OUTLOOK - A VERY SIGNIFICANT HYDROLOGIC DROUGHT CONTINUES ACROSS LARGE PORTIONS OF THE MARFC SERVICE AREA. VARIOUS TYPES OF DROUGHT DECLARATIONS (INCLUDING EMERGENCIES IN SOME AREAS) CURRENTLY REMAIN IN EFFECT FOR LARGE PORTIONS OF NUMEROUS STATES LOCATED WITHIN THE MARFC SERVICE AREA. PRECIPITATION, STREAMFLOW, GROUNDWATER LEVELS, RESERVOIR STORAGES, AND SOIL MOISTURE CONTENT HAVE ALL BEEN BELOW NORMAL FOR MONTHS ACROSS MOST OF THE MARFC REGION, AND CONTINUE BELOW NORMAL PRESENTLY. WHILE ACTUAL WATER SUPPLY SHORTAGES HAVE BEEN MINIMAL SO FAR, IT IS SAFE TO SAY THAT AVERAGE OR ABOVE-AVERAGE PRECIPITATION WILL BE REQUIRED FOR THE REST OF THIS WINTER WELL INTO THE SPRING TO PREVENT MORE SIGNIFICANT WATER SUPPLY SHORTAGES FROM DEVELOPING. IF THE TREND OF BELOW-AVERAGE PRECIPITATION CONTINUES THROUGH THE REMAINDER OF WINTER AND INTO SPRING, SOME VERY SERIOUS WATER SUPPLY PROBLEMS COULD DEVELOP LATER THIS SPRING AND DURING THE SUMMER, WHEN WATER DEMAND INCREASES.

THE NEXT WINTER/SPRING FLOOD POTENTIAL OUTLOOK WILL BE ISSUED BY THIS OFFICE IN TWO WEEKS, ON THURSDAY, MARCH 7, 2002.

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### 3.2 Example #2 - Short Narrative.

FGUS64 KFWR 171420  
ESGFWR

RIVER FLOOD OUTLOOK SUMMARY  
NWS WEST GULF RIVER FORECAST CENTER FORT WORTH TX  
918 AM CDT FRI MAY 17 2002

...ATTENTION WFOs...

THE FORECAST RAINFALL FOR THE NEXT 48 HOURS IS EXPECTED TO BE INSUFFICIENT TO PRODUCE RIVER FLOODING. THEREFORE...A RIVER FLOOD OUTLOOK WILL NOT BE ISSUED. FLASH FLOODING IS OCCURRING IN THE COASTAL AREAS OF HOUSTON...BUT THE RAIN IS NOT WITHIN BASINS WITH RIVER FORECAST POINTS.

\$\$

**4. Extended-Range Streamflow Prediction Product (ESP).**

FGUS66 KPTR 091902  
 ESPPDR

SEASONAL WATER SUPPLY FORECASTS  
 NWS NORTHWEST RIVER FORECAST CENTER PORTLAND OR  
 1102 AM PST TUE JAN 9 2002

JAN-02 FINAL WATER SUPPLY FORECASTS  
 80% PREC FIRST TWO WEEKS; NORMAL PREC REST OF WAY

STREAM AND STATION	PERIOD	FORECAST	%	AVERAGE
COLUMBIA RIVER				
MICA RESERVOIR INFLOW, BC	FEB-SEP	12200.0	93	13170.
	APR-SEP	11800.0	93	12730.
ARROW LAKES INFLOW	FEB-SEP	25300.0	94	26800.
	APR-SEP	24100.0	94	25540.
BIRCHBANK, BC (1)	APR-SEP	41700.0	95	43800.
GRAND COULEE, WA (1)	JAN-JUL	59300.0	94	63280.
	APR-SEP	60700.0	94	64850.
ROCK ISLAND DAM BLO, WA (1)	APR-SEP	66900.0	95	70480.
THE DALLES NR, OR (1)	APR-SEP	92200.0	93	98980.
	JAN-JUL	98700.0	93	105900.
	APR-AUG	86900.0	93	93250.

KOOTENAI RIVER				
LIBBY RES INFLOW, MT (1)	APR-SEP	6440.0	95	6772.
KOOTENAY RIVER				
KOOTENAY LAKE INFLOW, BC	APR-SEP	5800.0	95	16650.
DUNCAN RIVER				
DUNCAN RESERVOIR INFLOW, BC	FEB-SEP	2180.0	94	2319.
	APR-SEP	2100.0	94	2238.

THESE FORECASTS ARE SELECTED FROM THOSE PREPARED BY: NATIONAL WEATHER SERVICE...NATURAL RESOURCE CONSERVATION SERVICE...AND B.C. HYDRO AND POWER AUTHORITY. FOR VARIOUS PROJECT INFLOWS, THE FORECASTS HAVE BEEN COORDINATED WITH THE U.S. ARMY CORP OF ENGINEERS AND THE U.S. BUREAU OF RECLAMATION.

...ALL FORECASTS ARE IN THOUSANDS OF ACRE-FEET...

...ALL AVERAGES ARE FOR THE PERIOD 1961 THROUGH 1990...

END.....NORTHWEST RFC

\$\$

**5. Areal Flash Flood Guidance (FFG).**

**5.1 Example #1 - County Name.**

FOUS63 KKRF 251726  
 FFGKS

FLASH FLOOD RAINFALL GUIDANCE  
 NWS MISSOURI BASIN RIVER FORECAST CENTER PLEASANT HILL MO  
 1125 AM CST MON FEB 25 2002

K A N S A S H Y D R O L O G I C S E R V I C E A R E A S

FLASH FLOOD RAINFALL GUIDANCE BY COUNTIES  
 GENERAL FLASH FLOOD GUIDANCE FOR STEEP TERRAIN AND URBAN AREAS ARE  
 ONE TO TWO INCHES OR MORE IN ONE TO TWO HOURS OR LESS RESPECTIVELY.

.B KRF 020225 Z DH12/DC0202251717 /DUE/PPHCF/PPTCF/PPQCF

:IDENT	1HR	3HR	6HR	COUNTY NAME
:=====	=====	=====	=====	=====
:				
:	*****	DODGE CITY HSA	*****	
:				
KSC051	2.3/	2.4/	2.7	: ELLIS
KSC195	2.4/	2.6/	3.0	: TREGO
:				
:	*****	GOODLAND HSA	*****	
:				
KSC023	3.0/	3.1/	3.6	: CHEYENNE
KSC039	2.8/	2.9/	3.4	: DECATUR
KSC063	2.6/	2.8/	3.4	: GOVE
KSC065	2.2/	2.4/	2.8	: GRAHAM
KSC109	2.7/	2.9/	3.4	: LOGAN
KSC137	2.4/	2.6/	2.9	: NORTON
KSC153	2.7/	2.8/	3.2	: RAWLINS
KSC179	2.2/	2.4/	2.8	: SHERIDAN
KSC181	2.8/	3.0/	3.6	: SHERMAN
KSC193	2.5/	2.7/	3.1	: THOMAS
KSC199	2.7/	3.0/	3.6	: WALLACE
:				
:	*****	HASTINGS HSA	*****	
:				
KSC089	1.8/	2.0/	2.2	: JEWELL
KSC123	1.6/	1.8/	2.3	: MITCHELL
KSC141	1.7/	1.9/	2.3	: OSBORNE
KSC147	2.0/	2.2/	2.5	: PHILLIPS
KSC163	1.7/	1.9/	2.4	: ROOKS
KSC183	1.8/	2.0/	2.4	: SMITH
:				
:	*****	PLEASANT HILL HSA	*****	
:				
KSC005	1.4/	1.6/	2.0	: ATCHISON
KSC043	1.3/	1.5/	1.8	: DONIPHAN
KSC091	1.2/	1.5/	2.0	: JOHNSON
KSC103	1.1/	1.3/	1.7	: LEAVENWORTH
KSC107	1.4/	1.7/	2.2	: LINN
KSC121	1.4/	1.6/	2.2	: MIAMI
KSC209	1.2/	1.4/	1.9	: WYANDOTTE
:				

```

: ***** TOPEKA HSA *****
:
KSC003      1.3/  1.5/  2.0   :ANDERSON
KSC013      1.4/  1.6/  1.9   :BROWN
KSC027      1.5/  1.8/  2.4   :CLAY
KSC029      1.3/  1.5/  1.8   :CLOUD
KSC041      1.6/  2.0/  2.7   :DICKINSON
KSC045      1.3/  1.6/  2.1   :DOUGLAS
KSC059      1.4/  1.7/  2.3   :FRANKLIN
KSC061      1.4/  1.9/  2.6   :GEARY
KSC085      1.2/  1.4/  1.8   :JACKSON
KSC087      1.1/  1.3/  1.6   :JEFFERSON
KSC117      1.5/  1.7/  1.9   :MARSHALL
KSC131      1.4/  1.6/  2.0   :NEMAHA
KSC143      1.3/  1.5/  2.0   :OTTAWA
KSC149      1.4/  1.7/  2.2   :POTTAWATOMIE
KSC157      1.3/  1.4/  1.6   :REPUBLIC
KSC161      1.6/  2.0/  2.6   :RILEY
KSC177      1.3/  1.5/  1.9   :SHAWNEE
KSC197      1.6/  2.0/  2.6   :WABAUNSEE
KSC201      1.4/  1.5/  1.8   :WASHINGTON

```

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:
: ***** WICHITA HSA *****
:
KSC053      1.9/  2.1/  2.6   :ELLSWORTH
KSC105      1.2/  1.4/  1.8   :LINCOLN
KSC113      2.1/  2.3/  2.7   :MCPHERSON
KSC167      1.8/  2.1/  2.5   :RUSSELL
KSC169      1.9/  2.2/  2.6   :SALINE
.END

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\$\$

5.2 Example #2 - Zone Name.

FOUS61 KTAR 161522  
 FFGME

COUNTY FLASH FLOOD GUIDANCE  
 NWS NORTHEAST RIVER FORECAST CENTER TAUNTON MA  
 1120 AM EDT THU MAY 16 2002

GRAY HYDROLOGIC SERVICE AREA

:AVERAGE RAINFALL IN INCHES NEEDED TO BEGIN FLOODING.  
 .B HFD 020516 Z DH12/DC0205161520 /DUE/PPHCF/PPTCF/PPQCF/PPKCF/PPDCF

:.....MAINE

```

:
:IDENT      1HR    3HR    6HR    12HR   24HR   ZONE NAME
:=====
MEZ020      1.3/    1.9/    2.1/    2.3/    2.6    :ANDROSCOGGIN
MEZ001      1.1/    1.7/    1.9/    2.1/    2.4    :NW AROOSTOOK
MEZ002      1.1/    1.7/    1.9/    2.1/    2.4    :NE AROOSTOOK
MEZ006      1.1/    1.7/    1.9/    2.1/    2.4    :SE AROOSTOOK
MEZ019      1.3/    1.9/    2.1/    2.3/    2.6    :INT CUMBERLA
MEZ024      1.3/    1.9/    2.1/    2.3/    2.6    :COA CUMBERLA
MEZ008      1.2/    1.8/    2.0/    2.2/    2.5    :N FRANKLIN
MEZ013      1.2/    1.8/    2.0/    2.2/    2.5    :S FRANKLIN
MEZ016      1.3/    1.9/    2.1/    2.3/    2.6    :INT HANCOCK
MEZ029      1.3/    1.9/    2.1/    2.3/    2.6    :COA HANCOCK

```

```

MEZ021      1.2/  1.8/  2.0/  2.2/  2.5   :KENNEBEC
MEZ027      1.2/  1.9/  2.1/  2.3/  2.6   :KNOX
MEZ026      1.2/  1.9/  2.1/  2.3/  2.6   :LINCOLN
MEZ007      1.2/  1.8/  2.0/  2.2/  2.5   :N OXFORD
MEZ012      1.2/  1.8/  2.0/  2.2/  2.5   :S OXFORD
MEZ005      1.1/  1.7/  1.9/  2.1/  2.4   :N PENOBSCOT
MEZ011      1.3/  1.9/  2.1/  2.3/  2.6   :C PENOBSCOT
MEZ015      1.3/  1.9/  2.1/  2.3/  2.6   :S PENOBSCOT
MEZ004      1.1/  1.7/  1.9/  2.1/  2.4   :N PISCATQUIS
MEZ010      1.3/  1.9/  2.1/  2.3/  2.6   :S PISCATQUIS
MEZ025      1.3/  1.9/  2.1/  2.3/  2.6   :SAGADAHOC
MEZ003      1.3/  1.9/  2.1/  2.3/  2.6   :N SOMERSET
MEZ009      1.2/  1.8/  2.0/  2.2/  2.5   :C SOMERSET
MEZ014      1.2/  1.8/  2.0/  2.2/  2.5   :S SOMERSET
MEZ022      1.2/  1.9/  2.1/  2.3/  2.6   :INT WALDO
MEZ028      1.2/  1.9/  2.1/  2.3/  2.6   :COA WALDO
MEZ017      1.3/  1.9/  2.1/  2.3/  2.6   :INT WASHINGT
MEZ030      1.3/  1.9/  2.1/  2.3/  2.6   :COA WASHINGT
MEZ018      1.3/  1.9/  2.1/  2.3/  2.6   :INT YORK
MEZ023      1.3/  1.9/  2.1/  2.3/  2.6   :COA YORK
:
:.....NEW HAMPSHIRE
:
:IDENT      1HR    3HR    6HR    12HR   24HR   ZONE NAME
:=====
NHZ009      1.4/  2.1/  2.4/  2.5/  2.9   :BELKNAP
NHZ004      0.9/  1.5/  1.7/  1.9/  2.2   :N CARROLL
NHZ006      1.4/  1.9/  2.1/  2.3/  2.6   :S CARROLL
NHZ011      1.4/  2.1/  2.4/  2.5/  2.9   :CHESHIRE
NHZ003      1.1/  1.7/  1.9/  2.1/  2.4   :N GRAFTON
NHZ005      1.1/  1.7/  2.0/  2.1/  2.4   :S GRAFTON
NHZ012      1.5/  2.2/  2.5/  2.6/  3.0   :HILLSBOROUGH
NHZ008      1.4/  2.1/  2.4/  2.5/  2.9   :MERRIMACK
NHZ013      1.7/  2.4/  2.7/  2.9/  3.2   :I ROCKINGHAM
NHZ014      1.7/  2.4/  2.7/  2.9/  3.2   :C ROCKINGHAM
NHZ010      1.3/  1.9/  2.1/  2.3/  2.6   :STRAFFORD
NHZ007      1.1/  1.7/  2.0/  2.1/  2.4   :SULLIVAN
.END

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**6. Headwater Flash Flood Guidance (FFH).**

**6.1 Example #1 - With 1 Hour Values.**

FOUS73 KKRF 251727  
FFHMO

HEADWATER FLASH FLOOD GUIDANCE  
NWS MISSOURI BASIN RIVER FORECAST CENTER PLEASANT HILL MO  
1117 AM CST MON FEB 25 2002

M I S S O U R I H Y D R O L O G I C S E R V I C E A R E A S

.B KRF 020225 Z DH12/DC0202251717 /DUE/PPHCF/PPTCF/PPQCF

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:IDENT      1HR    3HR    6HR    HEADWATER NAME      STREAM
:=====
:
: ***** PLEASANT HILL HSA *****
:

```

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FFXM7      1.1/ / /      :FAIRFAX MO          TARKIO R
BRLM7      1.5/ / /      :BURLINGTON JCT MO   NODAWAY R
MYVM7      1.7/ / /      :MARYVILLE MO       102 R
AGYM7      2.0/ / /      :AGENCY MO 4NE       PLATTE R
SMHM7      1.2/ / /      :SMITHVILLE MO     LITTLE PLATTE R
SODM7      1.8/ / /      :ST JOSEPH MO        WHITEHEAD CR
SOBM7      1.6/ / /      :ST JOSEPH MO        BLACKSNAKE CR
KCCM7      1.8/ / /      :KC MO BANNISTER RD  BLUE R
KBNM7      2.8/ / /      :KNOBTOWN MO         LITTLE BLUE R
LKCM7      1.8/ / /      :LAKE CITY MO        LITTLE BLUE R
RICM7      1.2/ / /      :RICHMOND MO         CROOKED R
CAXM7      1.2/ / /      :CARROLLTON MO       WAKENDA CR
VLYM7      1.0/ / /      :VALLEY CITY MO      BLACKWATER R
MBYM7      1.1/ / /      :MOSBY MO            FISHING R
TTZM7      3.2/ / /      :TRENTON MO          THOMPSON R
CHZM7      2.8/ / /      :CHILLICTHE MO 2S    GRAND R
URHM7      1.1/ / /      :URICH MO 3NW        SOUTH GRAND R
BLRM7      1.2/ / /      :BLAIRSTOWN MO       BIG CR
BLVM7      2.0/ / /      :BLUE LICK MO        BLACKWATER R
OTTM7      1.1/ / /      :OTTERVILLE MO     LAMINE R
FYTM7      1.0/ / /      :FAYETTE MO          MONITEAU CR
BONM7      1.1/ / /      :BOONVILLE MO       PETITE SALINE CR
NVZM7      2.0/ / /      :NOVINGER MO         CHARITON R
KWPM7      2.5/ / /      :WARD PARKWAY        BRUSH CREEK
:
: ***** ST LOUIS HSA *****
:
JCMM7      1.5/ / /      :JEFFERSON CITY MO   MOREAU R
:
: ***** SPRINGFIELD HSA *****
:
TBNM7      1.3/ / /      :FT LEONARD WOOD MO  BIG PINEY R
CMZM7      1.5/ / /      :CAPLINGER MILLS MO  SAC R
.END
$$

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6.2 Example #2 - With 1, 3, and 6 Hourly Values.

FOUS72 KALR 151541  
FFHMEM

HEADWATER GUIDANCE...MEMPHIS CWA  
NWS SOUTHEAST RIVER FORECAST CENTER ATLANTA GA  
1140 AM EDT WED MAY 15 2002

INCHES OF RAINFALL FOR SPECIFIED DURATIONS REQUIRED TO PRODUCE  
FLASH FLOODING IN HEADWATERS. LOWER AMOUNTS MAY CAUSE  
FLASH FLOODING IN URBAN OR MOUNTAINOUS AREAS.

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.B ATR 20020515 Z DH12/DC200205151540 /DUE/PPHCF/PPTCF/PPQCF/PPKCF/PPDCF
:
:IDENT      1HR    3HR    6HR    12HR   24HR
:=====
ABDM6      2.5/  2.8/  2.9//
CBM         2.7/  3.0/  3.2//
TPOM6      2.4/  2.6/  2.7//

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:
: TO USE HEADWATER ADVISORY TABLES TAKE THE THREE HOUR VALUE
: ABOVE FOR THAT LOCATION AND USE THE FOLLOWING RELATIONS...
:
: TABLE 1 / 0 TO 2.4 IN          TABLE 4 / 4.1 TO 4.5 IN
:           2 / 2.5 TO 3.3 IN          5 / 4.6 TO 4.9 IN
:           3 / 3.4 TO 4.0 IN          6 / 5.0 IN
:
: .END
:
: $$

```

**7. Hydrometeorological Discussion (HMD).**

**7.1 Example #1.**

AGUS71 KTAR 041736  
HMDHFD

HYDROMETEOROLOGICAL DISCUSSION  
NWS NORTHEAST RIVER FORECAST CENTER TAUNTON MA  
1227 PM EST MON MAR 4 2002

HYDROMETEOROLOGICAL DISCUSSION:

TEMPERATURES ARE FORECAST TO BE SEASONABLY COOLER ACROSS MUCH OF THE REGION, IN FACT PARTS OF NEW YORK STATE HAVE FALLEN 20 TO 30 DEGREES FROM SUNDAY MORNING HIGHS. THIS WILL STEM THE RISES ON OUR RIVERS WHICH WE EXPERIENCED OVER THE PAST 24-36 HOURS. LARGE RISES WERE A RESULT OF RAINFALL AND SNOWMELT RUNOFF, ESPECIALLY OVER THE LAKE CHAMPLAIN, BLACK, NORTHERN HUDSON, AND UPPER CONNECTICUT DRAINAGE BASINS. HEAVY LAKE-EFFECT SNOWS ARE ONGOING ACROSS PORTIONS OF WESTERN AND CENTRAL NEW YORK, SO SOME FRESH SNOW WILL BE ADDED TO OUR EXISTING SNOWPACK. SNOW BANDS ABOUT 4-6 INCHES HAVE BEEN FORECAST. SNOW DEPTH REPORTS FROM THE TUGHILL REGION SHOW THAT THERE PRESENTLY EXISTS AT LEAST 20 INCHES OF SNOW. WITH NO SIGNIFICANT WARM WEATHER THROUGH MIDWEEK TO WORK ON THIS SNOWPACK, THE SNOW WILL BE ACCOUNTING FOR SOME HEAT DEFICITS, THUS RIVERS IN SOME OF THE PREVIOUSLY MENTIONED BASINS WILL EXPERIENCE FALLING RIVER LEVELS THROUGH MIDWEEK.

PRECIPITATION SUMMARY:

LARGEST ACCUMULATED PRECIPITATION OVER THE PAST 24 HOURS THROUGH MONDAY 7 AM FELL PREDOMINATELY OVER THE EASTERN PORTIONS OF OUR REGION, AS THE DEPARTING STORM DROPPED ABOUT 4/10 TO 5/10 ACROSS CAPE COD AND DOWNEAST MAINE. THIS RAIN FELL MOSTLY IN THE MORNING HOURS JUST AFTER 12Z SUNDAY. FURTHER INLAND, OUR RIVER BASINS SAW ABOUT 0.1 TO 0.2 INCHES OF PRECIPITATION TRIGGERED BY A COLD FRONT PASSING THROUGH THE CENTRAL HUDSON AND LAKE CHAMPLAIN DRAINAGES, SUNDAY LATE AFTERNOON AND EARLY EVENING. LAKE EFFECT SNOWS ABOUT 5-10 INCHES WERE REPORTED BY SPOTTERS IN CATTARAUGUS AND ALLEGANY COUNTIES, WHERE SOME OF OUR HEADWATERS LIE. YESTERDAY'S LARGEST PRECIPITATION EXCEEDING 0.6 INCHES WERE REPORTED FROM:

Sinclairville NY	0.69 INCHES OF LIQUID EQUIVALENT
Bingham ME	0.65 INCHES OF RAIN
Skowhegan ME	0.60 INCHES OF RAIN

HYDROLOGIC CONDITIONS:

OVER THE PAST 24 HOURS, RIVERS LEVELS ACROSS MUCH OF THE REGION HAVE EXPERIENCED SMALL TO MODERATE RISES. RISES EXCEEDING 1.5 FEET OCCURRED ACROSS SOME OF OUR RIVERS IN THE LAKE CHAMPLAIN DRAINAGES, SUCH AS THE MISSISQUOI, MAD, WINOOSKI, AND LAMOILLE RIVERS. MOST OF THESE SHARP RISES HAVE CRESTED. RIVERS ARE MOSTLY RECEDING IN THIS PART OF THE REGION WITH THE EXCEPTION OF LOCATIONS DOWNSTREAM OF REGULATED RESERVOIRS SUCH AS ESSEX JUNCTION VT. RISES WERE A RESULT OF RECENT RAIN AND SNOWMELT RUNOFF. CONSEQUENTLY, LARGE INFLOWS INTO AREA STREAMS IN THIS PART OF THE REGION HAVE RESULTED IN FLOWS 50 TO 150% ABOVE NORMAL FOR THIS TIME OF THE SEASON. WITH TEMPERATURES AVERAGING BELOW FREEZING, ESPECIALLY WHERE SNOWMELT RUNOFF WERE OPTIMAL THIS PAST WEEKEND FROM NORTHERN NEW YORK, NORTHERN/CENTRAL NEW ENGLAND, TO WESTERN/CENTRAL MAINE, INFLOWS INTO AREA STREAMS AS A RESULT OF SNOWMELT WILL BE WANING. FLOWS CONTRIBUTED FROM THIS TYPE OF RUNOFF HOWEVER ARE EXPECTED TO BE ROUTED TO DOWNSTREAM LOCATIONS, THUS SOME OF OUR RIVERS SUCH AS THE MOHAWK, CONNECTICUT, MERRIMACK, AND MAINE RIVERS WILL SLOWLY RECEDE.

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7.2 Example #2.

AGAK78 PACR 162300  
HMDACR

HYDROMETEOROLOGICAL DISCUSSION  
NWS ALASKA-PACIFIC RIVER FORECAST CENTER ANCHORAGE AK  
300 PM ADT THU MAY 15 2002

...HYDROMETEOROLOGICAL DISCUSSION FOR THE STATE OF ALASKA...

...FLOOD POTENTIAL...

FOR MORE INFORMATION ON BREAKUP CONDITIONS...SEE THE SPRING BREAK UP SUMMARY SRAK48PACR AND CURRENT FLOOD STATEMENTS.

FLOODING IS POSSIBLE ON THE YUKON AT NULATO AND KOYUKUK DUE TO A BREAK UP FRONT MOVING TOWARDS THE AREA WHICH HAD BACKED UP WATER BEHIND IT AT GALENA.

A FLOOD WARNING IS IN EFFECT FOR THE VILLAGE OF KWETHLUK ON THE KUSKOKWIM. HIGH WATER MOVING DOWNSTREAM ON THE KUSKOKWIM MAY CAUSE WATER LEVELS WHICH ARE ALREADY ABOVE BANKFULL AT KWETHLUK TO RISE AND CAUSE MINOR FLOODING.

THE WATCHES AT AKIAK AND UPPER AND LOWER KALSKAG HAVE BEEN DROPPED. THE WARNING AT ANIAK WILL EXPIRE AT 4 PM THURSDAY...BUT WATER IN THE VILLAGE MAY TAKE SOME TIME TO RECEDE.

SNOW MELT HAS INUNDATED LOW SPOTS OF THE CHENA HOT SPRINGS ROAD NEAR MILE 37.

FLOOD POTENTIAL IS LOW ACROSS THE REMAINDER OF THE STATE.

...HYDROMETEOROLOGICAL CONDITIONS...

ON WEDNESDAY...SOME LIGHT RAIN OCCURRED ACROSS SOUTH CENTRAL THE EAST AND SOUTHEAST INTERIOR AND IN THE PANHANDLE. AMOUNTS WERE GENERALLY LESS THAN 0.2 INCHES EXCEPT FOR A FEW COASTAL LOCATIONS WITH OVER 0.5 INCHES.

HIGH PRESSURE OVER THE STATE WILL KEEP MOST OF THE MAINLAND DRY OVER THE NEXT SEVERAL DAYS. TEMPERATURES WILL ALSO SLOWLY WARM UP THROUGH THE WEEKEND WITH SOME HIGHS IN THE 70S LIKELY. A FRONT WILL WEAKEN AS IT APPROACHES THE Y-K DELTA BRINGING A CHANCE OF RAIN TO THAT AREA LATE THIS WEEKEND.

A LOW SOUTH OF THE GULF OF ALASKA WILL CONTINUE TO ROTATE SOME SHOWERS INTO THE PANHANDLE.

ELSEWHERE, UPPER LEVEL RIDGING OVER WESTERN ALASKA KEEPS MOST OF THE MAINLAND WARM AND DRY. THIS PATTERN STRENGTHENS AND PUSHES EAST BY THE WEEKEND.

FREEZING LEVELS WERE AT THE SURFACE ALONG THE NORTH SLOPE THURSDAY MORNING AND HAD RISEN TO 5,000 TO 6,000 FT OVER THE CENTRAL INTERIOR.

CLEAR SKIES AND HIGHER FREEZING LEVELS SHOULD LEAD TO ADDITIONAL UPPER ELEVATION SNOW MELT OVER THE NEXT SEVERAL DAYS.

...HYDROLOGIC CONDITIONS...

HIGH WATER ON THE KUSKOKWIM REMAINS BEHIND A WEAKENING JAM BELOW ANIAK. THE REMAINDER OF THE KUSKOKWIM IS BECOMING FREE OF ICE AND FLOODING RELATED TO ICE JAMS IS NOT EXPECTED AT OTHER VILLAGES. HOWEVER...WATER LEVELS IN VILLAGES BELOW ANIAK MAY RISE IF THE JAM BELOW ANIAK RELEASES.

ACTIVE BREAKUP IS OCCURRING ON THE YUKON WHERE ONE BREAK UP FRONT WAS TRAVELING PAST FORT YUKON THURSDAY AFTERNOON AND ANOTHER WAS MOVING TOWARDS KOYUKUK. ADDITIONALLY...ICE AT RAMPART HAD ALSO BEEN RUNNING.

...SNOWPACK...

RECENTLY REPORTED SNOW DEPTHS FROM STATIONS WITH SNOW REMAINING:

..LOCATION.....DEPTH	..LOCATION.....DEPTH
.INTERIOR.....	
PABT-BETTLES           3	PAMC-MCGRATH           0
PAOM-NOME             1	PAOT-KOTZEBUE         3
.SOUTHCENTRAL.....	
HAT-HATCHER PASS     40	PASP-SHEEP MOUNTAI    0
PASW-SKWENTNA        0	PAWR-WHITTIER         18
PAMX-MCCARTHY        0	PATW-CANTWELL         6

THE HYDROMETEOROLOGICAL DISCUSSION IS ISSUED DAILY AT 3PM. THE NEXT HYDROMETEOROLOGICAL DISCUSSION IS SCHEDULED TO BE ISSUED THURSDAY MAY 16, 2002.

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**8. Hydrometeorological Coordination Message (HCM).**

AGUS83 KCRF 200323  
 HCMKRF

HYDROMETEOROLOGICAL COORDINATION MESSAGE  
 NWS MISSOURI BASIN RIVER FORECAST CENTER PLEASANT HILL MO  
 1024 PM CDT TUE JUN 19 2001

AT THE REQUEST OF WFO EAX, MBRFC WILL BE EXTENDING HOURS OF  
 OPERATION. WFOs AFFECTED BY TONIGHT'S RAIN AND NEEDING ADDITIONAL  
 FORECAST OR OTHER HYDROLOGIC SUPPORT ARE URGED TO PROVIDE AS MUCH  
 HYDROMETEOROLOGICAL DATA AS POSSIBLE. THANKS IN ADVANCE.

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**9. Hydrologic Data Summary Products (HYx).**

**9.1 Daily Data Summary Example (HYD).**

SXUS52 KALR 061656  
 HYDATR

24 HOUR RAINFALL COLLECTIVE ENDING AT 12Z  
 NWS SOUTHEAST RIVER FORECAST CENTER ATLANTA GA  
 1255 PM EDT MON MAY 6 2002

NOTE: DURING WINTER MONTHS SOME REPORTS MAY REFLECT  
 SNOWMELT INSTEAD OF ACTUAL RAINFALL REPORTS

.B ATR 20020506 DH12/PPD  
 :  
 : ID           PRECIP  
 :  
 CRVF1        00.59 :CRESTVIEW-SHOAL RVR (FL)  
 MOUN7        00.23 :MT ISLAND DAM-DUKE P (NC)  
 WASS1        00.19 :WARE SHOALS,SC (SC)  
 NBC          00.10 :BEAUFORT, SC (SC)  
 PRTS1        00.08 :PIERCETOWN-IFLOWS (SC)  
 SOUG1        00.07 :LITHONIA 6SSW/STH R (GA)  
 LERG1        00.06 :LEARY 5ENE/CHKSWHT C (GA)  
 MDVA1        00.06 :MOUNDVILLE, AL (AL)  
 TCLA1        00.06 :HOLT L&D,AL (AL)  
 MCN          00.05 :MID GA REG AP-ASOS (GA)  
 RBTA1        00.05 :ROBERTSDALE 5NE, AL (AL)  
 TMLG1        00.04 :THOMASVILLE 5WNW (GA)  
 DNVV2        00.03 :DANVILLE, VA (VA)  
 MTCS1        00.03 :MT CARMEL 5N/LTL R (SC)  
 DRAG1        00.03 :DORAVILLE 2NNE, GA (GA)  
 GREN7        00.02 :GREENVILLE,NC (NC)  
 NWBN7        00.02 :NORTH WILKESBORO, NC (NC)  
 SNKG1        00.01 :WHITESBURG 3NNW/SN C (GA)  
 WTNG1        00.01 :WASHINGTON 9S, GA (GA)  
 WLLN7        00.01 :WILLIAMSTON, NC (NC)  
 .END

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